



Generell informasjon

Brønnbane navn	34/10-17
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	GULLFAKS SØR
Funn	34/10-17 Rimfaks
Brønn navn	34/10-17
Seismisk lokalisering	8213 - 177 SP 158
Utvinningstillatelse	050
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	364-L
Boreinnretning	DEEPSEA BERGEN
Boredager	137
Borestart	22.02.1983
Boreslutt	08.07.1983
Frigitt dato	08.07.1985
Publiseringsdato	30.09.2011
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	135.0
Totalt målt dybde (MD) [m RKB]	3466.0
Totalt vertikalt dybde (TVD) [m RKB]	3460.0
Maks inklinasjon [°]	10
Temperatur ved bunn av brønnbanen [°C]	120
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP
Geodetisk datum	ED50
NS grader	61° 3' 58.93" N



ØV grader	2° 0' 50.78" E
NS UTM [m]	6770741.25
ØV UTM [m]	446787.09
UTM sone	31
NPDID for brønnbanen	5

Brønnhistorie

General

Well 34/10-17 was the first well drilled on the Beta structure in the SE segment of block 34/10, south-west of the Alpha-structure, which contained the Gullfaks Sør Field. The primary objective of the well was to evaluate possible hydrocarbon accumulations in the Middle Jurassic Brent sandstones. The secondary objectives were the Early Jurassic Dunlin and Statfjord sandstones.

Operations and results

Wildcat well 34/10-17 was spudded with the semi-submersible installation Deepsea Bergen on 22 February 1983 and drilled to TD at 3466 m in the Early Jurassic Statfjord Formation. The well was drilled down to 2687 m without special drilling problems. At 2687 m a heavy flow was observed after a drilling break. The well was shut in, and due to a plugged cement hose and kill line failsafe valve, about 200 hours were used to circulate out the influx, stabilize, clean up and condition the hole. Further technical failure and tight hole caused extensive time logging the 6" section, and the logging programme was reduced. The well was drilled with Seawater/gel spud mud down to 668 m and with seawater/gel/Lignosulphonate mud from 668 m to TD.

The Brent Group was encountered at 2685 m with hydrocarbon bearing sandstones in the Tarbert and Ness Formations. FMT pressures indicated a gas/oil contact at ca 2862 m, and an oil/water contact at ca 2914 m in the lower part of the Ness Formation. The logs indicated a total oil and gas net pay of 122.5 m with average porosity 22.5% and average water saturation 27%. Also the underlying water bearing Etive and Rannoch Formations of the Brent Group had good reservoir quality sandstones. The Dunlin and Statfjord sandstones were water bearing. Shows were recorded on cores down to 2947.5 m in the Rannoch Formation, and a geochemical core extract from 2923 m showed a chromatographic fingerprint no different from core extracts taken in the oil-zone. Otherwise no significant oil shows were seen in the well outside of the oil-bearing reservoir.

A total of 16 cores were cut continuously through the Brent reservoir section down to ca middle of the Rannoch Formation. The core-log depth match was generally good, but with minor deviations due to expansion of the cores after they were landed. The FMT tool was run for pressure samples in the Brent and Dunlin Group and in the Statfjord Formation. Segregated fluid samples were taken in the Brent Group at 2697 m (gas and condensate) and at 2889 m (oil).

The well was permanently abandoned on 8 July 1983 as an oil and gas discovery.

Testing

The well was tested from four zones in the Brent sand. One DST produced water, the other produced hydrocarbons.

DST 1 tested the interval 2934 to 2944 m and produced only water at a rate of 1024 Sm³/day through a 40/64" choke in the main flow. Maximum down hole temperature



recorded in the test was 108.1 deg C.

DST 2 tested the interval 2880 to 2890 m and produced 545 Sm³ oil and 134000 Sm³ gas/day through a 28/64" choke in the main flow. The GOR was 246 Sm³/Sm³, the oil density was 0.85 g/cm³, and the gas gravity was 0.74 (air = 1) with ca 1% CO₂ and 1 ppm H₂S. Maximum temperature recorded in the test was 106.0 deg C.

DST 3 tested the interval 2835 to 2845 m and produced 452 Sm³ condensate and 364000 Sm³ gas/day through a 32/64" choke in the third flow period. The GCR was 805 Sm³/Sm³, the condensate density was 0.78 g/cm³, and the gas gravity was 0.72 (air = 1) with trace CO₂ and no detectable H₂S. A somewhat higher oil rate and lower GOR was recorded on a 48/64" choke in the second flow period. Maximum temperature recorded in the test was 104.3 deg C.

DST 4 tested multiple intervals from 2754 to 2790.5 m and produced 320 Sm³ condensate and 428000 Sm³ gas/day through a 32/64" choke in the third flow. The GCR was 1338 Sm³/Sm³, the condensate density was 0.76 g/cm³, and the gas gravity was 0.71 (air = 1) with ca 1% CO₂ and 0.6 ppm H₂S. Maximum temperature recorded in the test was 101.2 deg C.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
230.00	3465.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2681.3	2699.3	[m]
2	2700.1	2718.1	[m]
3	2718.0	2736.4	[m]
4	2736.0	2754.0	[m]
5	2754.0	2771.3	[m]
6	2772.0	2790.0	[m]
7	2790.0	2808.5	[m]
8	2808.0	2826.2	[m]
9	2826.0	2840.3	[m]
10	2840.0	2858.0	[m]
11	2858.0	2875.7	[m]
12	2876.0	2894.3	[m]
13	2894.0	2909.7	[m]
14	2912.0	2930.0	[m]



15	2930.0	2948.3	[m]
16	2948.0	2965.8	[m]

Total kjerneprøve lengde [m]	282.5
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2681-2688m



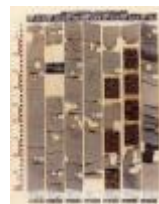
2688-2694m



2695-2699m



2700-2707m



2707-2714m



2714-2718m



2718-2725m



2725-2732m



2732-2736m



2736-2743m



2743-2750m



2750-2754m



2754-2761m



2761-2767m



2768-2771m



2772-2779m



2779-2786m



2786-2790m



2790-2797m



2797-2804m



2805-2812m



2813-2820m



2821-2828m



2829-2836m



2837-2844m



2804-2808m

2808-2815m

2815-2822m

2822-2826m

2826-2833m



2833-2840m

2840-2840m

2840-2847m

2847-2854m

2854-2858m



2858-2865m

2858-2885m

2865-2872m

2872-2875m

2876-2883m



2883-2890m

2890-2894m

2894-2900m

2901-2907m

2908-2909m



2912-2919m

2919-2926m

2926-2930m

2930-2937m

2937-2944m



2944-2948m

2948-2955m

2955-2962m

2962-2965m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2681.0	[m]	C	RRI



2682.0	[m]	C	RRI
2683.0	[m]	C	RRI
2689.0	[m]	C	RRI
2690.0	[m]	C	RRI
2691.0	[m]	C	RRI
2692.0	[m]	C	RRI
2693.0	[m]	C	RRI
2700.0	[m]	C	RRI
2704.0	[m]	C	RRI
2712.0	[m]	C	RRI
2717.0	[m]	C	RRI
2718.0	[m]	C	RRI
2723.0	[m]	C	RRI
2724.0	[m]	C	RRI
2728.0	[m]	C	RRI
2733.0	[m]	C	RRI
2736.0	[m]	C	RRI
2737.0	[m]	C	RRI
2741.0	[m]	C	RRI
2744.0	[m]	C	RRI
2747.0	[m]	C	RRI
2750.0	[m]	C	RRI
2753.0	[m]	C	RRI
2756.0	[m]	C	RRI
2758.0	[m]	C	RRI
2761.0	[m]	C	RRI
2764.0	[m]	C	RRI
2766.0	[m]	C	RRI
2771.0	[m]	C	RRI
2772.0	[m]	C	RRI
2776.0	[m]	C	RRI
2779.0	[m]	C	RRI
2784.0	[m]	C	RRI
2791.0	[m]	C	RRI
2794.0	[m]	C	RRI
2796.0	[m]	C	RRI
2800.0	[m]	C	RRI
2803.0	[m]	C	RRI
2806.0	[m]	C	RRI
2808.0	[m]	C	RRI



2810.0	[m]	C	RRI
2812.0	[m]	C	RRI
2815.0	[m]	C	RRI
2823.0	[m]	C	RRI
2825.0	[m]	C	RRI
2827.0	[m]	C	RRI
2829.0	[m]	C	RRI
2831.0	[m]	C	RRI
2833.0	[m]	C	RRI
2842.0	[m]	C	RRI
2848.0	[m]	C	RRI
2853.0	[m]	C	RRI
2855.0	[m]	C	RRI
2859.0	[m]	C	RRI
2860.0	[m]	C	RRI
2863.0	[m]	C	RRI
2865.0	[m]	C	RRI
2869.0	[m]	C	RRI
2872.0	[m]	C	RRI
2874.0	[m]	C	RRI
2877.0	[m]	C	RRI
2878.0	[m]	C	RRI
2890.0	[m]	C	RRI
2891.0	[m]	C	RRI
2894.0	[m]	C	RRI
2897.0	[m]	C	RRI
2899.0	[m]	C	RRI
2902.0	[m]	C	RRI
2904.0	[m]	C	RRI
2907.0	[m]	C	RRI
2909.0	[m]	C	RRI
2913.0	[m]	C	RRI
2915.0	[m]	C	RRI
2918.0	[m]	C	RRI
2921.0	[m]	C	RRI
2924.0	[m]	C	RRI
2927.0	[m]	C	RRI
2934.0	[m]	C	RRI



Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST2	2880.00	2895.00		07.08.1983 - 00:00	YES
DST	TEST3	2835.00	2845.00		22.06.1983 - 00:00	YES
DST	TEST4	2754.00	2790.00	CONDE NSATE	28.06.1983 - 06:20	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
160	NORDLAND GP
895	UTSIRA FM
952	HORDALAND GP
1060	NO FORMAL NAME
1167	NO FORMAL NAME
1194	NO FORMAL NAME
1357	NO FORMAL NAME
1376	NO FORMAL NAME
1565	NO FORMAL NAME
1679	NO FORMAL NAME
1714	NO FORMAL NAME
1762	ROGALAND GP
1762	BALDER FM
1837	LISTA FM
1983	SHETLAND GP
1983	JORSALFARE FM
2295	KYRRE FM
2587	CROMER KNOLL GP
2587	ÅSGARD FM
2590	VIKING GP
2590	HEATHER FM
2685	BRENT GP
2685	TARBERT FM
2717	NESS FM
2934	ETIVE FM
2937	RANNOCH FM



3000	DUNLIN GP
3000	DRAKE FM
3108	COOK FM
3220	BURTON FM
3267	AMUNDSEN FM
3422	STATFJORD GP

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
5_1	pdf	1.66
5_2	pdf	5.03
5_3	pdf	1.27

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
5_01 WDSS General Information	pdf	0.21
5_02 WDSS completion log	pdf	0.34

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
5_34_10_17 Analysis of core samples	pdf	0.57
5_34_10_17 Analysis of oil, cores and coal samples	pdf	0.65
5_34_10_17 Completion log	pdf	2.55
5_34_10_17 Completion Report	pdf	38.68
5_34_10_17 FMT Report	pdf	0.43
5_34_10_17 Funnevalueringsrapport	pdf	1.49
5_34_10_17 Petrophysical Evaluation	pdf	5.74
5_34_10_17 PVT analysis of bottom hole sample	pdf	0.20
5_34_10_17 Routine Core Analysis	pdf	1.18
5_34_10_17 Source Rock Analysis	pdf	2.59
5_34_10_17 Stratigraphical Paleontological Final Report	pdf	6.22
5_34_10_17 TBP distillation of oil DST2	PDF	0.27





5 34 10 17 Water Analysis DST1	pdf	0.36
5 34 10 17 Well Testing Report	pdf	3.02

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2934	2944	15.8
2.0	2881	2891	19.0
3.0	2835	2845	19.0
4.0	2754	2790	19.0

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				
3.0				
4.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0					
2.0	782	192000	0.820	0.740	245
3.0	734	530000	0.800	0.720	722
4.0	501	635000	0.760	0.710	1303

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CDL CNL GR CAL	221	3243
CORGUN	1901	2601
DIFL BHC GR SP	135	3453
DLL MLL GR CAL	2578	3014
FMT	2688	2980
FMT	2697	2697
FMT	2889	2889
HR DIP	305	2582





SP	2650	3012
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Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
CONDUCTOR	30	221.0	36	222.0	0.00	LOT
SURF.COND.	20	652.0	26	668.0	1.55	LOT
INTERM.	13 3/8	1902.0	17 1/2	1915.0	1.60	LOT
INTERM.	9 5/8	2580.0	12 1/4	2687.0	1.80	LOT
LINER	7	3015.0	8 1/2	3015.0	2.53	LOT
OPEN HOLE		3400.0	6	3466.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
255	1.06	41.0		waterbased	
668	1.19	32.0		waterbased	
1669	1.15	40.0		waterbased	
2206	1.26	50.0		waterbased	
2687	1.57	62.0		waterbased	
2912	1.60	61.0		waterbased	
3205	1.45	58.0		waterbased	
3464	1.50	60.0		waterbased	

Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
5 Formation pressure (Formasjonstrykk)	pdf	0.22

